Gymnastics in Relation to Health. See page 162.
Some New Drugs. See page 166.

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HEALTH

A WEEKLY JOURNAL OF

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XIII.—No. 323. FRIDAY, JUNE 14, 1889. [PRICE TWOPENCE.

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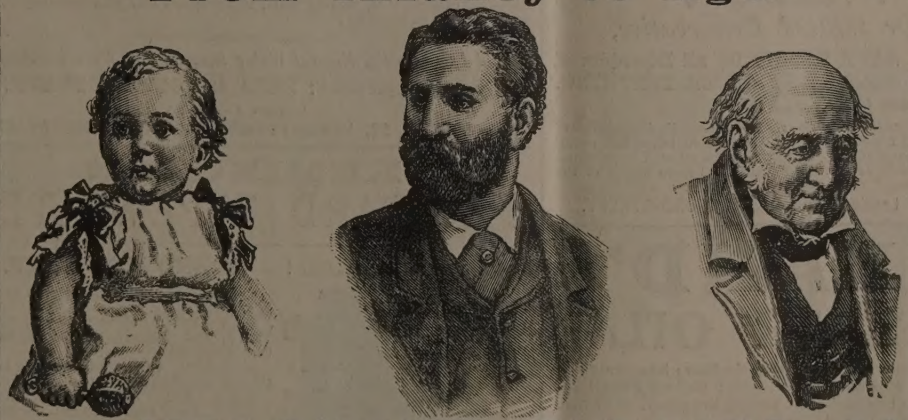

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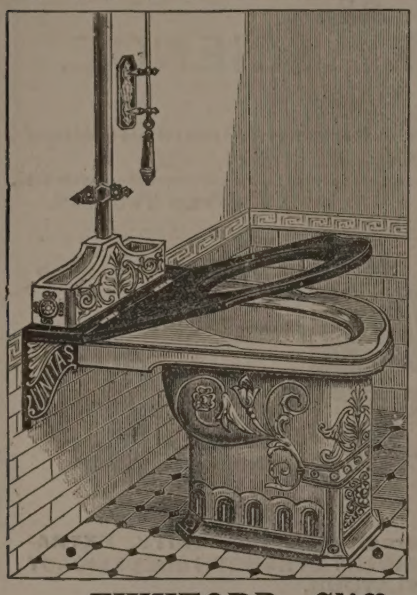

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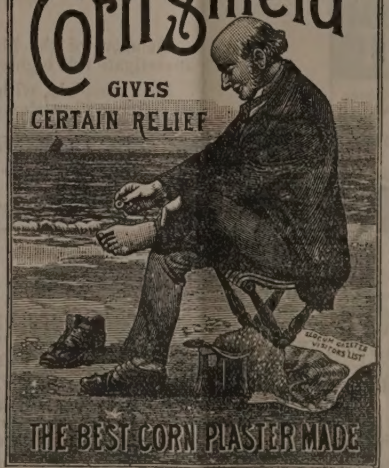

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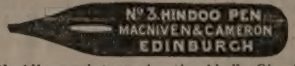

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N.B.—No woollen of any kind should be applied to the parts affected, nor any metal (except silver) touch the Pommade. It will retain its virtues many years, and is therefore very useful to all Travellers, particularly Gentlemen of the Army and Navy.

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◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

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CONTENTS OF No. 323.

	PAGE
Notes by the Way: By the Editor.	162
Original Essays:—	
Gymnastics in Relation to Health. First Paper. By Ellen F. White	162
Personal Health:—	
Peculiarities of Alcohol. By Dr. W. S. Searle	164
A Bilious Complexion	165
Our Medicine Chest:—	
Some New Drugs	166
Public Health:—	
On Iodate of Calcium as a Disinfectant. By Dr. Klein, F.S.A.	167
The Infective and Incubation Period in Contagious Diseases.	168
Healthy Houses:—	
Home Sanitation	169
Popular Science Papers:—	
The Shady Side of Brain Work. Ninth Paper. The Wonders of Animal Magnetism. By Gilles de la Tourette	170
Germs in Snow	171
Jottings from the Journals:—	
Treatment of Fatness—Economical Uses of Flowers—The Homes of the People—Increasing Longevity	172-73
IMPORTANT ANNOUNCEMENT	174
Our Letter Box:—	
Rules for Correspondents	174
Queries and Answers:—Replies: General, Sanitary, and Medical	175

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

THERE is a large amount of pathos in the following recital, due to the struggle of the maternal instinct with crass ignorance of all health rules as applied to the hygiene of young children. A poor woman in the east end of London had a child ill with inflammation of the bowels. The poor little thing died. The mother was heart-broken by the loss. She exclaimed, sobbing: "I am sure I did my best for baby; only the day before he died I made him take four penn'orth of eels, two eggs, and two glasses of port wine." In another case, a hospital physician asked the mother what she had given her infant, which was dying of consumption. "Oh! sir," said the woman, "I tried everything, and I even bought a pennyworth of winkles to see if they would tempt it to eat!" But this crass ignorance, excusable, if lamentable, in the lower orders, is less excusable in higher grades of society. A lady-doctor was once called up in the night to administer relief to an infant. "What has the child had to eat?" asked the physician. "Oh!" said the mother, "baby woke up about eleven o'clock, and I made nurse bring her down and gave her some of the lobster salad we were having to supper." And then she wondered why the child was ill!

AT a recent meeting of the American Gas Light Association, of Toronto, the following rules were given for the treatment of cases of suffocation from the inhaling of illuminating gas:—1st. Take the patient at once into fresh air. 2nd. Keep the patient on his back, and do not turn him on his side. 3rd. Loosen clothing at neck and waist. 4th. Give a little brandy and water, or ammonia mixture (one part aromatic ammonia to sixteen parts water), a teaspoonful every few minutes. 5th. Slap the face and chest with the wet end of a towel. 6th. Apply warmth and friction, if the body and limbs are cold. 7th. If breathing is feeble or irregular, keep up artificial respiration, even for several hours. 8th. Administer oxygen.

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DR. A. T. HUDSON has made a statement which may be contradicted by scores of people. Dr. Hudson asserts that whisky is no antidote for rattlesnake poison, on experiments made by Dr. S. Weir Mitchell. He says: "Dr. Mitchell mixed the virus of the rattlesnake with alcohol and with other reputed antidotes, and found, on injecting the solution into animals, that its power was not altered. He found also that the effect of the virus was subject to very well-defined limits, and that a quantity which would kill an animal of a certain size was much less powerful or inert upon larger animals. If a large snake should bite a goat of about fifty pounds weight, and afterward two children of corresponding weight, he might kill the goat, while the children would survive, because not enough virus was left after the goat was bitten seriously to harm the children; then, if whisky were given to the children, their recovery would be attributed to it, while it really had nothing to do with the matter. It is rare that an adult person dies from the bite of a rattlesnake. Whisky may, however, be regarded as physiologically antidotal, in so far as it will sustain the flagging powers while the poison is being eliminated by the excretory organs.

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FROM the *Quarterly Journal of Inebriety*, published at Hartford, Conn., under the auspices of the American Association for the Study and Cure of Inebriates, I make the following extracts from a recent lecture by Dr. Elliott, at Toronto, regarding the cure of drunkenness. Four conditions must be observed. The first condition of cure and reformation is abstinence. The patient is being poisoned, and the poisoning must be stopped. Were it an arsenic instead of an alcohol, no one would dispute this. So long as the drinking of intoxicants is indulged in, so long will the bodily, mental, and moral

CANCEROUS DISEASES.

TESTIMONIALS.

The following is from Dr. John Sheerer, St. Albans, Sept. 5th, 1888.

MR. JOHN M. YOUNG, *Manager Missisquoi Mineral Springs.*

DEAR SIR,—My mother, Mrs. Susan Sheerer, of Virgil, Cortland County, N.Y., was pronounced by Dr. Brunson, of said town, to have had a cancer in her breast in 1866. She used two cases of Missisquoi Water, and was cured. She is now eighty-two years old, and in splendid health. Yours truly,

JOHN SHEERER.

MISSISQUOI SPRINGS.

[An Extract from "The Monthly Homœopathic Review," May 1st, 1870.]

By Dr. TUTHILL MASSY.

The Missisquoi Springs of Franklin, County Vermont, are at present rather frequently prescribed in England for diseases where the knife was the severe medicine of other days: I therefore deem it my duty to lay before your readers the experience which I have gathered relative to these Springs.

* * * * * * * *

The Spring A, Missisquoi Springs, is the one most generally exported, and which I have frequently prescribed. It gave great comfort to a lady who was suffered from a large open cancer in the right breast; cleansed the surface, relieved the pain, induced sleep, and diminished the tendency to bleeding, when applied externally, like simple water dressing, and taken in half-tumbler doses twice a day.

The benefits of the Spring A were very remarkable in a lady burdened with an ovarian tumour containing much water, with considerable abdominal tenderness. A few bottles always reduced her great size, and relieved her mind from the dread of an operation which was once proposed.

PAMPHLET on application to the Sole Importers—

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AND OF ALL CHEMISTS

mischief be intensified and made permanent. Abstinence must be absolute, and on no plea of fashion, of physic, or of religion ought the smallest quantity of an intoxicant be put to the lips of the alcoholic slave. Alcohol is a material chemical narcotic poison, and a mere sip has, even in the most solemn circumstances, been known to re-light in the fiercest intensity the drink crave which for a long period of years had been dormant and unfelt. The second condition of cure is to ascertain the predisposing and exciting causes of inebriety, and to endeavour to remove these causes, which may lie in some remote or deep-seated physical ailment.

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THE third condition of cure is to restore the physical and mental tone. This can be done by appropriate medical treatment, by fresh air and exercise, by nourishing and digestible food given to reconstruct healthy bodily tissue and brain-cell, aided by intellectual, educational, and religious influences. Nowhere can these conditions of cure be so effectually carried out as in an asylum where the unfortunate victim of drink is placed in quarantine, treated with suitable remedies until the alcohol is removed from his system, then surrounded by Christian and elevating influences, fed with a nourishing and suitable diet, and supplied with skilful medical treatment. His brain and nervous system will then be gradually restored to its normal condition, and, after a period of from six to twelve months in most cases, he will be so far recovered as to be able to return to his usual avocation and successfully resist his craving for drink. The fourth condition of cure is employment. Idleness is the foster-mother of drunkenness; industry the bulwark of temperance. Let the mind of the penitent inebriate be kept occupied by attention to regular work, and the task of reformation will be shorn of half its difficulty.

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FOR a long time the quarters occupied by the live animals at the Smithsonian Institution, Washington, have been infested by rats; and every means known for their destruction or extermination have been used, but all to no purpose, as the rats are steadily increasing in number. They seem to know what rat-traps are for, and keep out of them, no matter how tempting the bait. But recently Capt. Weedin, who has charge of the animals, made a valuable discovery, by means of which he expects to clear the place of these destructive vermin. In a storeroom drawer a quantity of sunflower seeds, used as food for certain of the birds, was placed, and it was noticed that the rats eagerly gnawed their way through the drawer to get at the seeds, which they evidently relished. Acting on this supposition, Capt. Weedin baited his rat-traps with the seeds, and there was no more astonished man in Washington than he was when he discovered the next morning that every trap so baited held from ten to fifteen rats each. The rats were turned into the cages containing the weasels and minks, which did the killing in less time than it takes to tell it. The minks would kill the rats instantaneously.

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A NEW disease, called photo-electric ophthalmia, is described as due to the continual action of the electric light on the eyes. The patient is wakened in the night by severe pain around the eye, accompanied with excessive secretion of tears. An oculist of Cronstadt is said to have had thirty patients thus affected under his care in the last ten years. This opinion is, however, one which is contradicted by the experience of other oculists, who hold that there is nothing injurious to eyesight in the electric light.

Original Essays

"Life is not to live, but to be well."—*Martial.*

GYMNASTICS IN RELATION TO HEALTH.

BY ELLEN F. WHITE.

"Gymnastik Director" of the Royal Gymnastic Institute of Stockholm.

FIRST PAPER.

IN order that the importance of a rightly conceived and executed course of gymnastics may be fully realized and valued, it is necessary for us, in the first place, to examine what resources for exercise are open to the ordinary run of mankind, and how far they fulfil their purpose.

Walking is held by many to be the grand panacea for all evils which flesh is heir to. But there are many cases in which it fails to have any beneficial effect at all, and sometimes it has to be discontinued altogether. Walking, considered by itself, is a very one-sided form of exercise. The muscles of the back are kept rigid to preserve the balance. "Elegance of deportment" then demands that the arms shall be kept as still as possible; the hands fixed in a muff, or folded on an umbrella or parasol. These small items not only affect the general balance, but prevent full and deep respiration. The legs, therefore, are the only part of the body which get fully exercised, and for them the monotony of the movement is unvaried. The high heels, so much admired now, add to the fatigue of walking; every extra thickness of leather on the heel throws the body more out of its equilibrium. The taller the pedestrian the more this defect is exaggerated, necessitating very severe work on the part of the muscles of the back to counteract a too-forward tendency.

These high heels have another disadvantage in walking—they are always undercut, or made to slope forwards, so that the heel of the shoe comes nearly under the instep, thus considerably shortening the foot, and, as a consequence, shortening also the length of step which can be taken, as well as pressing on the blood-vessels and nerves which pass under the foot. Even where the shoes and form of dress are all that can be desired, many persons find walking far from being either useful or agreeable as an exercise. Much of this may be attributed to psychical causes. I wonder if any medical man has ever tried the effect of such a walk as that to which children (and their teachers) are so often condemned. Compelled to walk two and two with a companion chosen by the leader of the walk; not allowed to look about them; sometimes not even allowed to return the greetings of friends; with constant reminders as to holding up the head, turning out the toes, keeping the arms still, &c. Can any one imagine a greater penance than this sort of walk, or wonder that the children come in fagged and depressed, and far from inclined to sit down and study?

In England it is girls chiefly who are subjected to this form of "recreation;" and I am thankful to say that in many schools rounders, cricket, and other games are taking its place. But some one may ask, "How is my child to be taught to walk unless she practise walking as an art?" This is best answered in considering what is necessary for good walking. It is a much more complicated affair than most persons are aware of. First, upright carriage; second, good balance; third, freedom of every limb; and fourth, above all, a free respiration, without which the heart will be restricted. Most

certainly these conditions are best attained by other means than by walking, which is by no means the simple matter we might at first imagine. Head exercises for the head, to cure the poke of the chin; chest and shoulder exercises; back and leg and trunk exercises, to develop each part according to its need and in harmony with the rest, will give a firm, free carriage, suggestive of health and endurance. Riding is an invigorating and healthy exercise; but girls need to be carefully watched, especially if growing fast, that they do not become crooked from the effects of the one-sided saddle. Dancing, in moderation, is good, but the dancing for hours in tightly-laced dresses is often the cause of much trouble with the heart. I do not intend to touch upon games, beyond saying that the more varied the movement the more good they will do; and all games are of especial benefit to the chest if both arms are used impartially. But any arm exercise used to excess is indulged in at the expense of the heart and lungs. It will thus be seen that we must look farther afield than the ordinary run of amusements to preserve the body in good health. The man who devotes himself to athletics of all kinds gets perhaps as much variety as may be required to preserve his health; but as soon as one form predominates one-sided development is the result. There are many who have no chance of getting what we must call "all-sided" work for their bodies. Men are sitting all day at their desks; or if they follow any manual labour it is mostly such as will bring only one set of muscles into play. As is well known, most professions leave their stamp upon the outward man, like the bow-legs of the rider, or the stoop of the student. What we want, then, is to find some method, within the reach of all, by which the one-sided tendency of their occupations may be counteracted, and the whole body brought into harmonious development. For this result we must look to a systematic course of gymnastics which leaves no part neglected and develops no part at the expense of another.

The plan of opening a gymnasium and allowing the pupils to do as they please, is a course which has many disadvantages. Each one does what is right in his own eyes. That which he likes to do and can do the most easily and well will be the only thing thought of. Another will try to excel his comrades in one or more directions, and to excite wonder at his own achievements. This is but the spirit of the acrobat and professional athlete, who suffers as much as any other professional from the disease attendant upon his work. To make gymnastics fully serve their purpose, each one must make up his mind to lay aside emulation, and to do his best irrespectively of what others are doing. I am speaking specially of the principles of the Swedish system of gymnastics, known by the name of their founder, Ling, and formulated and developed by his two great pupils, Professors Branting and Georgii.

Ling divides his subject into four great branches, each with its own strongly-marked features, which yet merge into one another; so that it is not always easy to say to which branch some particular movement may belong. These four branches are respectively the æsthetic, the military, the educational, and the medical. For the first and second a few words must suffice.

I. The study of the æsthetical is chiefly confined to actors, speakers, singers, and others to whom it is of importance to express much by gesture. To the ordinary schoolboy or schoolgirl mind, æsthetical gymnastics are an enigma; and the "ridiculous" is so perilously near to the sublime that it is best to leave this branch until the need for it is felt by the individual.

II. Military gymnastics have a much wider application, embracing the whole of the military drill, which is thus set upon a scientific basis. The educational drill prepares for the military, so that when a boy leaves school and serves his time in the army he has nothing to unlearn. Three months is then considered sufficient for the compulsory drill.

III. The course of educational gymnastics has the widest sphere. Every man, woman, or child may be brought under its influence, so long as they are free from any pronounced disease. In this case medical gymnastics must be resorted to to restore the balance of health. There are many branches of educational, or, as they are sometimes called, health gymnastics; but in all the principles are the same, and the differences are in degree, not in kind. Educational or school gymnastics have their special use for children, both boys and girls, during the whole of their school life. Their object is to develop and train the body to a properly harmonious whole, counteracting the evil effects of bad positions and too sedentary a life. The exercises are so arranged that the pupils progress almost imperceptibly from the simplest and easiest movements to the stronger and more complicated forms suited to the fully-grown and well-developed man or woman; the man's developing into vigour of movement, the woman's into precision, becoming slower and more rounded, thus imparting a greater dignity of form. They are again modified to suit the advance of old age and its attendant infirmities.

IV. Medical gymnastics, called also "the Swedish movement-cure," are applied in many and various ways; but they must always be given individually. Each patient has the full and sole attention of the gymnast whilst treating him, and each has his own prescription suited to his special needs; whereas in health and military gymnastics the work is done in classes varying in number according to circumstances.

The illnesses and ailments treated by gymnastics are almost as many as those treated by medicine; and the different movements are at least as many and as varied in their use as the different drugs prescribed by the physician. They are equally adaptable for the bed-ridden patient, who can scarcely move hand or foot, and to those who, whilst suffering from disease, yet retain their strength of muscle. I shall endeavour to show in a later paper something of what I mean. I will now only allude to the fact that the idea is very prevalent that medical gymnastics must consist of active and vigorous movements; whereas, for the weak, they are mostly passive, but in all cases strictly proportionate to the strength or weakness of the patient. It has been said to me, by way of questioning their applicability to all cases, "Oh! I could never jump about and turn head over heels like you!"

To many, the one aim of gymnastics is to strengthen the muscular system, leaving out of sight altogether that this course will, in the long run, succeed only at the cost of the vital organs. It puts upon these organs such a strain that they will get utterly worn out in the attempt to supply the demand made upon them. The beauty of Ling's system is that it cares for all parts of the body, paying special attention to the vital organs, such as respiration, circulation, digestion, &c., and thus meeting the demand made upon them by extra muscular exertion, through an increased supply of vital force. The importance of this statement may be realized by reflecting that if the lungs are weak the blood cannot be properly oxidized. If the blood be poor, the tissues of the whole body will be starved; and if the process of digestion be

interfered with, the blood will suffer, and through the blood the whole body will be enfeebled. Keep these organs in thoroughly good working order, and the result will be that the work which the muscles can undertake will be in strict proportion, and they will be better able to stand any sudden demand upon their resources.

REPORT OF THE MEDICAL OFFICER TO THE PORT OF LONDON.—The half-yearly report upon the sanitary condition of the Port of London during the six months ending 31st December last has recently been presented to the Corporation by Dr. Collingridge, the Medical Officer of Health. The total number of vessels inspected during the period amounts to 10,050, and of these 8,738 carried the British flag, the next nationality in point of numbers being the Scandinavian, with 483. Ten vessels were fumigated, on account of infectious disease having occurred on board; 214 structural alterations have been made for the improvement of the hygienic condition of vessels, the shipowners carrying these alterations out. "The health of the Port," Dr. Collingridge says, "has been most satisfactory. Practically, no disease of any importance has existed during the past half-year." Only 10 cases of infectious disease have come under the notice of the Port Sanitary Authority—viz., 3 enteric fever, 2 malarial fever, 1 small-pox, 1 chicken-pox, 1 measles, 1 intermittent fever, and 1 erysipelas. In one instance only the master of a ship failed to report a case of infectious disease, and was duly cautioned, it being thought that in this case a warning would be sufficient. Attention is called to the fact that a large number of vessels, such as sailing barges, trading within the limits of the Port, are at present exempt from compulsory notification of infectious disease, and the advisability of notification being made compulsory to every vessel within the Port, irrespective of class, is strongly urged. To cause this to be brought about, Dr. Collingridge suggests that the Port Sanitary Authority should call upon the Local Government Board to obtain powers from Parliament to sanction bye-laws for the notification of infectious diseases, when applied to by a sanitary authority, in the same way, and under the same restrictions, as bye-laws are now made under the Public Health Act for other purposes. He says, "I believe this to be possible, and, if carried out, would not only give the Port Sanitary Authority that power which is absolutely needed for the protection of the Port, but would also enable other local authorities to obtain the same, if desired, with but little trouble and practically no expense. It would, of course, be a much simpler plan for the Government to bring in a bill for the notification of disease throughout the country, but unfortunately the time is not yet come for so advanced a measure, and moreover, compulsory powers are worse than useless to any authority which does not wish to make use of them." It has been decided that in cases where emigrants are rejected, on examination, by the Board of Trade Medical Officer, and their passage-money returned to them, the owners of the vessel are not liable for their maintenance in hospital. The water-barges in the Port have received careful attention, and on many of them extensive repairs have been ordered. Three parcels of deceased seamen's effects, sent home without any proof of disinfection having taken place, were fumigated. A number of seizures of unsound meat, &c., have been made, but the quantity seized has in most cases been small. The articles of food thus dealt with include fresh meat, tinned meat, onions, sardines, plums, pears, pigs' heads, herrings, geese, poultry, and dates.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

PECULIARITIES OF ALCOHOL.

BY DR. W. S. SEARLE.

Is truth ever a debtor to falsehood? Are reforms ever promoted by exaggeration, misrepresentation, or deliberate untruth? On first thought—no. On reflection—yes. History affirms this, and philosophy explains it. Indeed, no reformation can be cited, whether in law, custom, morals, or religion, which has not been largely indebted to fanatical leaders who, by as much as they were so, were beyond and largely outside of the realm of truth. Free trade has its Cobden, religion its Luther, emancipation its John Brown, and temperance has its Matthew and its Dow.

Philosophy explains these facts. The inertia of the human mind and soul is immense. Absorbed as men are in the struggle for existence, in the gratification of passion and appetite, in the thousand aims of life, their attention to existing evils can with difficulty be aroused. Still harder is it to initiate reform; harder yet to carry it to a successful issue. Not until a cause finds fanatical advocates, who can look but one way, see only one goal, put aside everything—even truth itself—to reach it, and thus arouse discussion and opposition, can a reform make notable progress. And thus truth becomes a debtor to falsehood.

Rarely, if ever, are these *avant courriers* right either in the principles they advocate, or in the means they employ to establish them. In time, the world moves forward toward them; sometimes to one or the other side of them, perhaps even beyond them. But if it ever occupies their ground it is not for their reasons. Such men are as narrow in their views as they are intense in their purposes. Like red-hot pokers, they burn their way where broader natures would fail to penetrate. But the holes they make are small. Still, when their cause is good, we must applaud them for the results which, without their aid, would fail of accomplishment.

It is thus we regard those who would rally the world to temperance reform under the banners of total abstinence. They are fighting a hideous evil, they are leading the "forlorn hope" in conflict with it, and, for the sake of the good which has come, and is to come, from their efforts, we accord them hearty applause, and cordially second their aims.

But yet temperance is the true doctrine, and total abstinence is fanatical error. Alcohol is not, in all its forms, and everywhere, and under all circumstances, an evil. On the contrary, not seldom it is a benefit, and not an insignificant one. Can it injure this reform to state this? to prove it? Can it hinder the coming of the millennium of temperance by an hour? If we thought so, not a line would we trace. But it cannot be. For on whatever basis of law or custom the world finally rests as regards this question, it must be that which is supported by the exact truth, and not by fanatical falsehood. To every philosophic mind, the very fact that the pioneers of this reform insist upon their peculiar views and methods is, *à priori*, proof that they are untrue and impracticable.

But broad views of this subject are out of place here, and I have been asked to speak to only a single phase of it—viz., the peculiarities of alcohol. Our query, then,

is, Does alcohol, in its various forms, bear the same relation to all men, affect all alike, produce in all identical physical, mental, and moral results? And the reply must be, Surely not. Are we misstating when we attribute different views to abstinence advocates? Do they not, with their favourite physiologist, Richardson, at their head, represent alcohol in all its forms to be everywhere and under all circumstances poisonous to the human race? Do they not hold that, if every substance containing it were at once and for ever annihilated, mankind would reap benefit only, and injury in no particular? Overlooking all other causal factors, do they not constantly attribute to its pathogenetic influence a multitude of diseases which are by no means exclusively found in drunkards? These are mere samples of their many exaggerations and perversions of fact. Have any of them faced about and studied, with and through the eyes of practical physicians, the possible benefit of a proper, rational use of alcoholic beverages?

Let us first consider the pathological effects of alcohol. We shall find them far from uniform. Not seldom, as is the case with tea, coffee, tobacco, arsenic, and other substances, the human system gradually becomes accustomed to alcohol and tolerant of its presence. If consumed in moderate quantities, and in its milder forms, it is extremely doubtful whether it is capable of producing any disease in the majority of individuals. Indeed, with much reason it may be claimed that it sometimes prevents disease. It is doubtless true, however, that, in moderate quantities, even wine and beer, and, much more, distilled spirits, do produce certain forms of both functional and organic diseases, in many instances. Prominent among these, and best authenticated, is that class of diseases the essential feature of which is an increase or hardening or thickening of the cellular tissue of various organs. But the list of pathological changes attributed, with more or less (often less) reason, to the habitual use of alcohol, is too extensive for even enumeration here. If we are to believe some pathologists, there is no known poison which is responsible for such a number of organic changes.

It should give us pause, however, when we remember in how many instances men consume alcohol in large quantities, and in its most pernicious forms, during many years, and yet survive to a green old age. One may find examples of this sort in every community; and not seldom cases of almost unparalleled longevity in drunkards are recorded in the public press. Only recently the Paris correspondent of the New York *Tribune* narrated the following history: M. Dronin was born in Brittany, as attested by a Navy-Office certificate, in 1787. He has just died by accident while intoxicated. He was wont regularly to consume a bottle of wine with his dinner, and follow that meal with a glass of brandy. According to his own testimony, he "never knew one of his ancestors who was not fond of cider brandy." He also affirmed that he "always went to bed partially intoxicated." It is added that the physicians who made the autopsy were astonished at the soundness of his organs, and stated that, if it had not been for the accident, he might have lived twenty years longer. It is true that this is a newspaper account, and may, therefore, be unreliable, but, in view of numerous similar histories, it is also quite possibly true.

But such facts give no pause to some pathologists. They go right on attributing the majority of lesions found in the bodies of drunkards to alcohol exclusively. If scleroses, fatty degenerations, &c., were not reasonably frequent in sober men, and these forms of disease were always found in inebriates, their conclusions would have more weight. That alcohol does produce organic diseases is highly probable; indeed, it may be said to be quite certain. But surely this does not warrant an entire disregard of all other causes, nor the selection of this one with such confidence in each individual case. Other wiseacres have found in vaccination the origin of nearly every disease. Others still, with equal vigour, curse tobacco. But logical minds must class them all together as cranky and fanatical. Surely if men composed of flesh and blood and bone, like their fellows, can drink distilled liquors freely and steadily for fifty, sixty, seventy years, and finally die, like few others, of old age, we are justified in concluding that there must be exaggeration somewhere as to the pathogenetic effects of alcohol.

Probably those diseases named above and a few others are justly and largely attributable to alcohol. And if so, its pathogenetic powers, as compared with those of other poisons, are exceedingly multifarious. Original hereditary influences, variety of employment, the rapid elimination of this substance by the emunctories, and established tolerance count for much in solving the problem of the variety of results; but, even so, it must be acknowledged that no other drug can be named the pathogenetic effects of which are so diverse, and which yet not seldom fails to show itself nocuous at all. It may justly be claimed, however, that in the sedentary, and therefore bilious, degeneration of the liver is most constant, while in those of nervous temperament, brain diseases are most common.

It may also be noted that alcohol is least injurious to men of lymphatic temperament—slow, heavy, unexcitable samples of humanity who seem to need some whip to wake them up. Many such absorb large quantities of stimulants with as little visible effect as water, and upon such it produces its minimum of evil, as well as its maximum of benefit. When one of such temperament leads an active, out-of-door life, which necessitates rapid breathing, profuse perspiration, &c., it may well be doubted whether, upon the whole, a moderate use of stimulants is not a physical blessing, prolonging and enriching life, as well as preventing disease rather than producing it.

(To be concluded.)

A BILIOUS COMPLEXION.

THE colour of the skin and hair is determined by the presence of certain colouring matter called pigment, and it is found that special conditions tend to produce this pigment in greater quantity. Sunlight causes this colouring matter to appear in great quantity in exposed parts, as is shown by the tanned face and arms of workmen out of doors. Heat also tends to darken the skin, and it has been found that workers near a hot furnace become much darker in colour, though not exposed to light, the presence of the clothes not preventing the change. As disease makes the skin grow paler, so also does it make it grow darker, and more particularly those maladies which affect the liver. Perhaps we have from these facts a partial explanation of the reason that residents of hot climates are usually darker coloured. But such have, no doubt, through ages been exposed to malarious influences, the effect of which is to more or less derange the liver; so we find that brunettes are more prone to hepatic troubles than blondes. The writer recalls a case in which there had been malarial trouble for many years: the liver was very badly diseased, and so black did the skin become that, were it not for the white of the eyes, the man could have passed for a negro.

We are all familiar with the dark countenance, the rings under the eyes, and the blotches on the face that characterize a deranged liver. When the liver is out of order the kidneys are more or less affected too. What should pass out of the system is retained therein; instead of the mind being clear, it seems covered with a cloud. Food palls upon the palate, and in the morning there is a bad taste in the mouth, and the tongue is clammy. How is it possible, under the circumstances, that the complexion shall be clear? Then, again, town life is a factor interfering with the beauty of the skin. Sanitary science tells us that only a certain number of people can live healthfully on a specified area. If the prescribed limits be overpassed, it is to the detriment of the health of all. So we find that our much-boasted civilized town life is a non-civilized mode of existence. The absence of ozone alone in the air of a place like London tells a singularly impressive story to those who know how to interpret aright. The difficulties in indoor employment are that the foods we eat are not properly oxidized or burned up, and so all the machinery is clogged.

For those of a bilious temperament a three-grain blue pill occasionally is a most admirable measure. It had best be taken at bedtime, followed in the morning by a seidlitz powder. To prevent the skin itself from being dry, and thus prone to break out in pimples, the ordinary alkaline soaps should be discarded, and one containing an excess of fat, instead of free soda or potash, used. "Vinolia" superfatted soap is one that should be employed, and for skin-irritation of any kind the "Vinolia" Cream is, without a doubt, the most elegant and efficacious remedy known.

A WORD TO THE MEDICAL JOURNALS.—Says the *Globe*:—Civilization and progress, instead of leading to a diminution of medicines not recognized in the Pharmacopœia of the Royal College of Physicians, has resulted in an opposite effect. For a number of maladies, or, perhaps, it should be said, names of maladies, have been called into existence unknown to our sturdy forefathers. For instance, we have half-a-dozen new designations for what our great grandmothers would have called a "fit of the spleen." And for every new name which is devised by the ingenuity of nosologists at least half-a-dozen remedies appear with mushroom rapidity. Even the medical journals teem with advertisements of so-called remedies not admitted into the Pharmacopœia. Bromidia, "the hypnotic which does not lock up the secretions"; elixir of cascara, "laxative, palatable, reliable"; pumiline, "for bronchitis, throat and chest affections, fully recognized by over 500 testimonials"; vinolia, "which will relieve the intensest itching from any cause whatever"; liquor cascara suavis, "registered," are a few among many similar articles advertised in a recent medical journal. Now, when orthodox medical journals insert advertisements of the kind they might with grace refrain from, as they sometimes do, calling the lay press to account for the insertion of advertisements of patent medicines. For to the lay mind there really does not appear very much difference between the advertisement of medicated bonbons, "protected by royal letters patent," in a medical journal and advertisements of a like character in a daily newspaper.

CHEMICAL ANALYSIS.—DR. DRINKWATER, Lecturer on Chemistry in the Edinburgh Medical School, undertakes the Analysis of Water, Foods, Wall-Papers, and of all other products and articles connected with Household Health and Commercial Interests. Terms on application to Dr. Drinkwater, Chemical Laboratory, 41, Chambers-street, Edinburgh.

Our Medicine Chest.

"THE aim of using drugs is not so much to destroy diseases as to aid and assist the natural powers to overcome the disease-principle."—*Holland.*

SOME NEW DRUGS.

ANTIPYRIN is still considered a new drug. Though it has been before the profession for a long while, its wonderful properties have not been fully understood or appreciated until quite recently. Prominent among its actions is its faculty of relieving headache, and so decided and unquestionable is this that it is worthy of special note. In his recent Croonian lectures, Dr. MacAlister said:—"A condition in which it had an excellent effect—some called it a specific action—was migraine. In his own person he had found that nothing acted so promptly or so certainly in averting or assuaging the the paroxysm." Dr. Kingsbury reports that he gave the drug in twenty cases, some of which had suffered for ten years. "In no case did the Antipyrin fail." "It prevents as well as cures the attacks." *The British Medical Journal* (January 17th, 1888) says:—"There seems no reason to doubt that in Antipyrin we possess a powerful anodyne for pain of nervous or rheumatic origin. Dispensed in the form of Tabloids, it is easily administered, and may be given either hypodermically or by the mouth." From one to three Tabloids is the amount usually required for headache.

In cases of fevers this drug may be administered with rather greater safety than antipyretics generally. It has a great faculty of easing pain, agrees well with the system, and quiets the nervousness. It is said to be well adapted for infants. It is also good for headache. The dose is two or three five-grain Tabloids.

The victims of sleeplessness will be glad to know of Sulphonal, of which a prominent German authority recently said:—"It rarely disappoints expectations. Sleep usually comes on within half an hour—seldom later than one or two hours—and lasts for six or eight hours." It does not irritate the stomach, or produce any bad symptoms whatever, and there is no liability to contract a sulphonal habit by using it. Indeed, the dose required does not need to be increased. People vary greatly in their susceptibility to its action, one person requiring three Tabloids for a dose, and another person as many as ten. The main objection to Sulphonal is the price, which is somewhat high.

As nearly everybody knows, soda-salicylate has long been regarded as about the best of drugs for acute rheumatism. Its tendency to irritate the stomach is known to all who have had to take it, and has been a great drawback to its general usefulness, interfering extensively with its being taken. Salol has come to the relief. It is 60 per cent. salicylic acid and 40 per cent. carbolic, is insoluble, and passes through the stomach unaffected and unaffecting it. This is a great advantage. "The first great triumphs of *Salol* were won in the treatment of acute rheumatism," says Bartholow. It seems to "remove certain morbid materials from the system," and "of late has been used in preference to the alkaline salicylates, to act after entering the blood, in acute and chronic rheumatism, myalgia, sciatica, wryneck, certain forms of neuralgia, and headache due to

excess of uric acid" (Caldwell). It is used as an antiseptic in intestinal troubles, in kidney and bladder affections, wounds, ulcers, &c., and as an antipyretic. The dose is from two to six five-grain Tabloids.

An Aching Tooth.—The tooth that means to come out has conquered all men and all women. It has been soothed and coaxed. It has been held near fires until the cheek abutting it was nearly roasted. It has been chloroformed. It has been fed on essence of juniper and essence of peppermint and essence of cloves. It has been filled. Its nerve has been killed. Its miserable owner has been immured from fresh air like a prisoner. This tooth sometimes sleeps, but it never forgets. It is most treacherous when it seems tranquil. It ulcerates at the roots when its possessor is about to indite a poem, take a journey, or get married. It longs for release, and hungers for the forceps. It may seem to compromise, but it merely bides its time. Its favourite recreation hour is just after midnight, when druggists and dentists have retired. If the ground is covered with snow and the winds piercing, it is fairly diabolical with activity. There is no use in contesting issues with this mutinous and remorseless molar. Fight rheumatism, if you will, but throw up the sponge in this altercation. You have blistered your mouth, and ruined your digestive organs, and quarrelled with your family and friends long enough. Tell the dentist to pull your head off and the accursed grinder with it, and live on soup if need be, but have peace once more. Jerk the abomination out, and it will be content, the everlasting plague on it!

Evening Dress and Health.—Dr. Vacher says that one cannot speak highly of evening dress, for it is a long way from perfection. Still, most men look better in it than they do in anything else. It is popular, and has withstood many attempts to alter it. The reformer will waste his time in advocating a radical change, and he will do better to make suggestions for the correction of hygienic defects. What are the defects of men's evening dress? First, the material is invariably too thin. This fault is readily amended by a simple flannel lining, which may be added to any suit without interfering with the fit of the clothes or the freedom of movement and comfort of the wearer. Secondly, the very low waistcoat leaves the chest covered by the jersey and shirt-front only. This is remedied by wearing a large "chest protector" over the jersey—that is, two layers of thick flannel at least three inches broader and longer than the waistcoat opening. Wearing a chest-protector next the skin made of wash-leather, &c., which gets very foul, is a practice justly condemned; but there can be no objection to a double layer of flannel immediately under the shirt-front. In the third place, dress boots are generally made so tight that only thin silk or cotton socks can be worn under them. A very slight increase in the size of boots will make them large enough to go on over merino socks. Having the boots well stretched may be all that is needed. It has also been said that the light muslin tie which replaces the silk scarf of morning dress renders the wearer specially likely to catch cold. If this be so, the white tie can be made heavier by folding a strip of flannel within it.

Special Notice.—The best stimulant for dietetic and other purposes is the "Skerryvore" (Registered) Blend of Fine Matured Scotch Whiskies, certified of the utmost purity by Mr. E. G. Clayton, F.C.S., Member of the Society of Public Analysts. Sold only by John Twatt, 36, Argyle-place, Edinburgh. Price 20s. per gallon, bottles and cases included.—[Advt.]

Public Health

"Health is the first Wealth."—*Emerson.*

ON IODATE OF CALCIUM AS A DISINFECTANT.

By Dr. Klein, F.R.S.*

Iodate of calcium was brought under my notice in 1887 by Mr. Weaver, C.E., as a disinfectant of uncommon value. Though expensive, as compared with so-called disinfectants in common use, iodate of calcium is a perfectly innocuous substance. Provided, therefore, that it be found really efficient, and that it can be manufactured in abundance at a reasonable price, a use may be found for this iodate as a disinfectant.

Some preliminary experiments which I made with the iodate proved that, besides being harmless to the human system,† it certainly has considerable disinfecting properties—properties which place it above carbolic acid, permanganate of potash, and phenylpropionic and phenylacetic acids. I therefore commenced a series of systematic experiments to test more accurately its restraining and its killing power as regards microbes.

Having prepared a strong solution of the salt, 1 part of the iodate to 500 parts of water, as a stock solution, my method of procedure was the same as that adopted in former and somewhat similar experiments, described in the Reports of the Medical Officer for the several years 1883 to 1886. The restraining power of iodate of calcium, although greatly superior to that of carbolic acid, and of phenylpropionic and phenylacetic acids, is nevertheless considerably inferior to that of perchloride of mercury.

As I have shown in last year's report, perchloride of mercury and nutritive gelatine solution of a mercurial strength of 1 in 40,000, has upon most samples of bacillus anthracis some sort of inimical influence; and in an earlier report I have shown that a similar mixture of a strength of 1 in 20,000 has commonly a decided restraining power on this as on most pathogenic organisms.

My recent experiments with iodate of calcium have accordingly proceeded on the plan of passing by successive steps from weak to stronger solutions of the disinfectant in gelatine. They were made upon (*a*) anthrax spores; (*b*) sporeless anthrax of cultivation; (*c*) sporeless anthrax of blood; (*d*) cultivation of bacillus of swine erysipelas; (*e*) cultivation of bacillus of swine fever.

(1) A series of gelatine tubes containing calcium iodate in the proportion of 1 iodate in 40,000 gelatine, along with other (control) tubes containing normal unmedicated gelatine, were simultaneously inoculated with the above several organisms. After several days' growth in the incubator no restraining power was noticed in any of the medicated tubes; and inoculation experiments made on animals (in the case of anthrax on guinea-pigs, in the case of swine erysipelas and swine fever on mice) with growth from medicated and from non-medicated tubes, were equally efficient in inducing the diseases.

(2) A series of tubes of medicated gelatine, 1 in 20,000 (1 iodate of calcium to 20,000 gelatine), was next inoculated together with control tubes as before. And

* From the Report of the Medical Officer of the Local Government Board.

† Doses of one to two grains administered to adults several times daily, and for several successive days, produced no physiological effect, except that presence of iodide was demonstrable in the saliva.

with like result; no restraining power, and no loss of virulence.

(3) A series of tubes of medicated gelatine, 1 in 10,000, was then similarly inoculated, and control tubes as well. The result was again negative. Anthrax spores germinated well in the tubes in the usual time; and bacillus anthracis of cultures and of blood produced there typical and normal growths. So did also the bacillus of swine erysipelas and the bacillus of swine fever. The action of these growths was in turn tested on animals, and the virulence of the contained organisms was found to be unimpaired.

(4) A series of tubes of medicated gelatine, 1 in 6,000, was next taken for inoculation, and in these tubes were noticed the first signs of a restraining power of the iodate, There was growth in all the medicated tubes, but the growth was retarded and smaller in amount than in the control tubes. The virulence of the growths was not, however, much impaired in the few experiments on animals that I was able to make. The most that could be said was that death was somewhat delayed.

So far, then, as restraining power is concerned, iodate of calcium is a much less powerful disinfectant than perchloride of mercury. And its inferiority to the mercury salt was further proved by experiments upon rodents.

The Killing Power of Iodate of Calcium.—With strong solution of iodate of calcium (1 in 500), I mixed thoroughly virulent anthrax blood in the proportion of one drop with half a watch-glass (about 100 drops) of the iodate solution: and with several drops of this mixture I inoculated three guinea-pigs: No. 1 after the mixture had stood five minutes, No. 2 after ten minutes, and No. 3 after fifteen minutes. All three animals had the next day local œdema at the seat of inoculation—a sure sign of anthrax infection—and on the following day, *i.e.*, within forty-eight hours, were found dead of typical anthrax, with enormous œdematous swelling all along the abdomen and thorax.

Later, strong solution of calcium iodate (1 in 500) was kept mixed in similar fashion with virulent anthrax blood for thirty minutes and sixty minutes respectively. Guinea-pig No. 5 was then inoculated with several drops of the former, and guinea-pig No. 6 with a like quantity of the latter solution. Both animals died of typical anthrax; guinea-pig No. 5 during the second, guinea-pig No. 6 during the third day after inoculation.

I have also tested the disinfecting power of this strong solution of iodate of calcium (1 in 500) on cholera comma-bacillus of Koch, and have found that it has no power to arrest the movement, *i.e.*, the life, of these comma-bacilli. A mere trace of a culture of the comma-bacillus was added to a comparatively large quantity—several drops—of the strong solution, and the comma-bacilli in this mixture were watched under the microscope. They, however, appeared perfectly unimpaired in their mobility. Inoculation of gelatine with materials from the medicated mixture yielded typical normal culture of the comma-bacilli.

Thus it is seen that while a solution of perchloride of mercury in water of the strength of 1 part mercury in 5,000 kills the (sporeless) bacillus anthracis of the blood, iodate of calcium of ten times that strength (1 in 500) is incapable of doing so. But iodate of calcium, though inferior to perchloride of mercury in disinfecting power, has nevertheless, as I have pointed out in the introduction to this report, the advantage of being quite innocuous when swallowed with food or drink.

There remains to be determined the amount of time required after admixture of a solution of iodate of calcium of, say, 1 in 1,000, with a given fluid, for destruction of the life of one or another organism contained in it. This is a very wide question, since every species would have to be tested separately on account of their very various powers of resistance—as, indeed, has been abundantly illustrated in former reports in connection with the testing of other disinfectants.

ARSENIC IN BONE MEAL.—"Feeding bone meal," so-called "precipitated phosphate," has been successfully added to the food of cattle in doses ranging from 2 to 15 grms. daily for young animals, and 20 to 50 grms. for adult individuals. If the acid used in the manufacture is arseniferous, calcium arseniate or arsenite will accompany the phosphate. The proportion of arsenic in the samples examined ranged from 0·028 to 0·17 per cent. (calculated as metallic arsenic).

THE INFECTIVE AND INCUBATION PERIOD IN CONTAGIOUS DISEASES, WITH SPECIAL REFERENCE TO THE EXCLUSION OF SUCH CASES FROM DAY SCHOOLS.—Dr. Finlayson, of Glasgow, has collated together in a short paper all the well-ascertained opinions on the subject, and the following is an abstract of the chief results, *i.e.*, the opinion of the majority of the authorities:—Scarlet fever, incubation, 1 to 7 days; infective period, 8 weeks; period of quarantine necessary, 11-14 days. Measles: incubation period, 10-14 days; infective period, 4 weeks; quarantine, 16 days. German measles: incubation period, variously stated, shortest 4 days, longest 21 days; infective period, 21 days; quarantine, 16-21 days. Mumps: incubation period, variously stated, from 4-24 days; infective period, 21 days; quarantine, 21 days. Whooping-cough: incubation period, 4 to 14 days; infective period, 6 weeks; quarantine, 21 days. Chicken-pox: incubation period, 10-18 days; infective period, about 4 weeks, "when every scab has fallen"; quarantine, 18-21 days. Small-pox: incubation period, 5-14 days; infective period, 3-6 weeks, "when every scab has fallen"; quarantine, 16-18 days. Diphtheria: incubation period, 2-5 days; infective period, variously stated, shortest period 21 days, longest 8 weeks; quarantine, 10-12 days. Typhoid fever: incubation period, 1-21 days; infective period, variously stated, from 1-2 months; quarantine, 28 days. Typhus fever: incubation period, 1-21 days; infective period, 3-4 weeks; quarantine, 21-28 days. Erysipelas: incubation period, 1-8 days, usually 4 days; infective period, "when all desquamation has ceased"; quarantine, 10 days. Dr. Finlayson's chief authorities are Murchison, Vacher, Squire, Alder Smith, Richardson, Stephenson, Clement Dukes, and Newsholme.

FIFTH EDITION.—NOW READY.—GREATLY ENLARGED, AND COMPLETELY REVISED.

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Healthy Houses

"A happy home must be a healthy home."—*Anon.*

HOME SANITATION.

Not only the skilled sanitarian, health officer, man of science, or medical man can become a practical sanitarian, but each head of a family and each individual can become a health officer, providing, in a measure, proper sanitation for his immediate home and surroundings. The physical training and development of physical manhood of the Spartans did not depend more on laws and customs than on home influence and self-education. So to-day the healthfulness of the home and the consequent vigour of the family do not depend, or should not, more on the man of science and technical learning than on the care, education, habits, and the observance of the plain, simple rules of health of the individual whose observations every day cover his abode and realm of existence.

No man is entitled to a home unless he can make that home happy and healthful. He has no right to be the means of bringing misery to others, or to leave to posterity the legacy of ill-health or constitutional weakness. It is the duty of all to be healthy, and so observe the laws of hygiene that he may contribute the full measure of his individual well-being to the public good. His indifference or neglect of health laws and the observance of the sanitation of his home is not only a crime against himself, but the infliction of a wrong on the public and a burden on posterity. In this country, with its plan of society and intercourse, no family is isolated. Whatever conditions may produce disease in one family are often responsible for sickness in others. Cases are recorded where disease has had its origin traced to very remote causes both as to time and place, and these causes have been found to be the result of neglect in the proper care of the home. The fact that such cases are not always found in the homes of the destitute and ignorant is evidence that in families of the well-to-do and cultured there is a want of the observance of the simplest sanitary precautions, which, we are constrained to believe, results more from neglect and indifference than from ignorance and the means to be employed.

A mistaken idea prevails that an epidemic must prevail before there is need for any sanitary precautions, when the truth is, such epidemics are always evidence that these precautions have been fatally neglected. Moreover, the greatest mortality does not result from epidemics, but from deaths constantly occurring in the course of such diseases as are admitted to be wholly preventible, and result most frequently from the unsanitary conditions of neglected homes, and, in the absence of inspection and preventive means, extend throughout communities. Such diseases as diphtheria, scarlet fever, typhoid, and others of this class, are constantly carrying off their victims, and, in the aggregate, far surpass the deaths in epidemics. These diseases, if they do not result directly from ill-kept homes, find a lodgment, and their virulence and extent is increased. To such a degree has sanitary knowledge been disseminated, and the facilities for gaining such knowledge are so ample, that it is not a Utopian dream to suppose every individual a sanitarian and every home a sanitarium.

It is not so much the ignorance of health laws as it is the neglect of their observance that is responsible for the greater portions of ills that afflict humanity. The lesson to be taught is the proper use of the knowledge imparted. The State boards of health within the past few years have made great and rapid advances. Some of the States are so thoroughly organized and disciplined that on the first appearance of infectious diseases notification is given, and means for the prevention of their contagion are instantly employed. Yet there is a further advancement to be made, and that lies in impressing that education and its value which will secure the personal attention of the layman to the proper care and sanitation of his own home. What to do and how to do it is not the end and all of the sanitarian's efforts; to learn what do and how to do it is not the limit of effort on the part of those who are taught. But means of securing the accomplishment of these things is the end in view, and this can be attained by the same progress in this direction that has been achieved in the promulgation of sanitary knowledge. Faith in these teachings will be created, and belief will be established on its own works.

The Origin of Bock Beer.—Where the name bock beer originated has never been definitely settled, and each year some new story, or a revised version of an old one, finds its way before the public in explanation thereof. The following is, therefore, given for what it is worth. The origin of the word "bock," which is to be banished from all patriotic French bills of fare because of its German origin, has a comical derivation. It was at Munich that first it came into vogue, during Louis' eccentric reign. The King had visited a large brewery one day and tasted freely of the good Bavarian beer of the establishment. Coming out after the function was over, the Sovereign was a trifle unsteady on his legs,—from fatigue, let us say, and gratification at the reception he had met with from his loyal subjects of the brewhouse. A goat was gamboling around on the outside, and, as his Majesty essayed to walk to his carriage, the goat and he collided, and Louis measured his length on the ground, to the unspeakable horror of the spectators. His Majesty was picked up and dusted and comforted, and the unruly goat took to his heels in affright, like the unblessed quadruped in the Pentateuch, immortalized by the brush of Holman Hunt. But from that hour a glass of Bavarian beer went by the *sobriquet* of a "bock,' which is the German word for he-goat.

Sex in Disease.—In the *Australian Medical Journal* for April 15th, 1887, Dr. Jamieson discusses this complicated question within the narrow limits of an introductory lecture. His argument is, briefly stated, that women are more highly organized than men, as proved, not only by moral superiority, but also by intuitive perception, superior grace of form, relative absence of abnormalities, relative absence of idiocy, higher vitality, and comparative immunity from various diseases. We confess that the author has failed to convince us, and that the facts are better explained, in our opinion, by more "brutal" and less transcendental considerations: moral superiority (which is capable of debate), by comparative seclusion from the struggle for existence and its temptations; intuitive perception, by the very absence of the habit of minute reasoning; superior grace of form, partly by sexual selection, but partly by arrest of development; relative absence of abnormalities is not true of *all* abnormalities; relative absence of idiocy, by smaller heads at birth. The question of comparative probability of living at different ages has been many times debated, and seems to depend mainly on greater evolution of the nervous system, and the burden of life in males, and parturition in females. The article is well written, and we do not forget the maxim, "*Audi alteram partem.*"—*Lancet.*

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

THE SHADY SIDE OF BRAIN WORK.

PAPERS ON DREAMS, MESMERISM, AND ALLIED TOPICS, BY VARIOUS WRITERS.

NINTH PAPER.

THE WONDERS OF ANIMAL MAGNETISM.

By GILLES DE LA TOURETTE.

In this way a great variety of suggestions can be produced, not only in the brain properly so called, but in all the special senses. Presenting to a somnambulist a leaf of paper perfectly white, I say to him, "Here is a photograph of me." He immediately sees my portrait on that paper—sees it so plainly, so truly, that if I shuffle that particular leaf with any number of leaves exactly like it, he will readily recognize and pick out the one upon which his brain shall, in accordance with my assertion, have impressed my photographic image. So, too, with regard to hearing or to taste: we may cause the somnambulist to hear a concert of harmonious sounds where absolute silence reigns; we can make him drink the bitterest liquids, which he shall deem to be delightful beverage. The sensibility, both general and special, is also lulled to sleep in somnambulists, at least in those that keep the eyes closed; but when by a definite excitation or suggestion the operator has summoned that sensibility to quit the apparent apathy in which it is sunk, the awakening is comparable to an explosion. The subject's acuteness of sight and of hearing is extraordinary; he will see and hear sights and sounds that he could hardly distinguish in the waking state, owing to their distance. This supersensibility has given occasion to the belief in the power of somnambulists to see objects at enormous distances, or through opaque bodies, and the like. The truth is, that in the somnambulist every sense is exalted, and the same holds good as to his muscular strength. We have spoken of the strong hold the magnetizer has on the subject. Well, let the subject be a woman possessing as little physical strength as may be. Let several persons stand between her and the operator, and let him summon her to come to him. She will struggle with them if they oppose her movement, and in doing so will display a surprising degree of strength.

This leads us to treat of suggestions of acts to be performed by the subject. These suggestions, of course, are various, and may be highly complex. For example, we order a somnambulist to go and steal the watch of some one in the company, and to bring it to us. The suggestion is *adopted*—for the subject is not simply a mere automaton, a passive creature: on the contrary, he reasons out perfectly the suggestion conveyed to him. Often he is unable to resist it, but again sometimes he positively refuses to accept the suggestion, especially when it goes very strongly counter to his habitual sense of honesty, of modesty, &c. But suppose he accepts it, still he does not execute it automatically; he will employ, in executing it, all the resources of a mind more or less acute, ever guided by his own proper intelligence.

We cannot pursue further this study of the various suggestions that may be conveyed to the somnambulist; their great diversity defies description or analysis. Still, we must dwell for a moment upon the subject of criminal suggestions, for that has been agitating the public mind for some time. On this point some writers have brought forward theories which, however logical, are contradicted by the facts of observation. The somnambulist, it has been said, may become the trusty instrument of others' vengeance; for, as we see in the laboratory experiments, the operator can place a weapon in his hand and make him do the act of assassination—the dumb show of assassination, that is to say, for the pistol is not loaded, and only in the imagination of the somnambulist is a shot fired. But account has to be taken of circumstances, of the subject's resistance already spoken of, and of the many difficulties that in ordinary life attend the execution of such suggestions. Minute analysis of the results of observation, in fact, shows that while the detection of rapes committed upon lethargic subjects is comparatively frequent, there is no case yet on record of the commission of a crime by a lethargic somnambulic subject acting under orders from a magnetizer.

This leads us to speak of the persistence of the suggestions. The somnambulist may execute the suggestion even after he has passed out of the somnambulic state. On awaking, though he may have forgotten everything except the order given him, and though he may not remember even the name of the "suggestor," he proceeds to carry out the suggestion, and that at the time fixed for it. After a couple of days, or a week, or a month or two, a thought that to him seems new will suddenly occur to him. We say "a thought that seems new to him," for the somnambulist, or, better, the one that has been "suggestioned" in the somnambulic state, is no madman, for ever revolving a fixed idea; the thought occurs to him instantaneously, at a set time; it masters him wholly, and he must carry out the order at any cost, and carry it out he will, overcoming, as far as possible, all obstacles that may stand in his way. If the order be that he kill a man, he will do it openly, though the victim be hedged with policemen; he will on occasion use strategy, but his one purpose is to attain his end, whatever may happen. One who commits a crime under these conditions will speedily be arrested, and though he may have forgotten the name of the instigator to the crime, it will be easy to discover the one who armed him for the deed. An ancient axiom says, *is fecit cui prodest;* nevertheless, the true criminal may escape the penalty of his act. After a pretty thorough search, however, we have found no record of crimes of this kind. The crime that may fairly be charged upon hypnotism is rape, and that is committed by the hypnotizer upon the hypnotized.

Suggestion does not belong to the somnambulic state exclusively; probably it has a place also in the lethargic state. The subject has been as yet but little studied, but it is certain that suggestion can be conveyed in the catalepsy. Some of the cataleptics differ very little in this respect from the somnambulists; they are decidedly less quick to show emotion and more reluctant to accept suggestions; but these, once accepted, are executed all the more inevitably, all the more automatically. In this state it is, furthermore, possible to convey suggestions of a special character that possess a peculiar interest for the physiologist and the philosopher. First, there are *suggestions by gesture.* The cataleptic is a being that is motionless, expressionless. Now raise the arms so as to bring the outspread fingers in front of the mouth, as when one is sending a kiss; immediately the countenance assumes a smile, and the body is inclined forward—in

short, the whole attitude is conformed to the supposed situation. The gesture has suggested the thought, but because of the automatism of the cataleptic state it persists: the cataleptic continues to smile, and would continue, so to speak, for an indefinite time, were the catalepsy to be protracted. If we change the position of the hands, and stretching one arm forward we bend the other, at the same time clinching the fists, the boxer's attitude is at once fully assumed, and the face reflects the thoughts of one who is actually defending himself against an antagonist. Of course these experiments may be varied *ad infinitum*.

But phenomena more interesting still may be produced. As is well known, the grand researches of Dr. Duchenne, of Boulogne, have enabled that great *savant* to determine with precision, by topical electrization, the physiology of the several muscles of the face, which control, usually in combination, the expression of the feelings. Take, for example, the pyramidal muscle of the nose—Duchenne's *muscle of aggression*—and excite this in a cataleptic subject by means of faradization. Immediately the muscle contracts, and the skin of the base of the nose is wrinkled transversely—purely a local effect of the electrization. But from habit, or perhaps in consequence of a training which has brought into association the cerebral functions and the action of the muscles which they control, the subject of the experiment assumes a special attitude, answering to the physignomic expression produced by exciting the muscle of aggression. The fists become clenched, the body inclines forward, the general posture is that of a man about to fall upon an aggressor. By a complex operation the excitation of a special muscle has in this case suggested a special and correlated thought—the thought of self-defence; and the brain, in its turn, completes the series of acts. In this instance the thought of fighting arises, and is carried out to its results in an order the reverse of that which is seen when the ordinary mechanism is at work.

This brief exposition of the facts shows what advantages are presented by hypnotism for the study of certain intricate problems of physiology; so, too, from the point of view of philosophy, hypnotism may be of great service in explaining the very complex mechanism of thought.

Nor are these the only advantages derivable from hypnotism when the process is employed by experienced medical men. For ten years and more it has been found at La Salpêtrière that the hypnotizing *séances*, oft repeated and methodically conducted, have in hysterical patients much diminished the frequency of the attacks. The benefit of hypnotization may be still more direct, in that it is better to put an hysteric patient asleep than to allow a paroxysm to come on, with all its unpleasant consequences. But in such cases intervention has to come betimes, for once the paroxysm is on, the subject is no longer hypnotizable. When the hysteric patient is awakened after a certain time, she will have escaped the convulsions. Again, it is known that an hysteric seizure sometimes leaves behind, after it has passed away, certain complications that may become permanent affections of the nature of contractions or paralysis. Even where these complications exist, nay, especially where they exist, hypnotization may have the happiest effects. By calling into action the neuro-muscular super-excitibility the lethargic patient is relieved of the contractions through excitation of the antagonist muscles. Finally, suggestion is of great avail in the special type of paralysis studied by Dr. Russell Reynolds. Suggestion may be effective even where the paralysis has continued for some time, and we have successfully treated cases of more than one year's standing.

Hypnotism in these cases plays the part of a medicinal agent, and as such it must be employed with the most scrupulous care. Now, facts prove how dangerous an agent it is in incompetent hands. We have seen many a proof of this; for, unfortunately, hypnotism seems now to have become public property, whereas it never ought to have been taken out of the domain of medicine. It must be remembered that in persons predisposed to hysteria hypnotism develops that disorder.

Hence we must condemn those mountebanks who, knowing nothing of medical science, and employing the most violent methods, go about magnetizing persons either so regardless of their own health, or so ignorant of the danger as to submit to such practices. Besides, some of those who witness such exhibitions begin to practice the hypnotic manipulations at home on those around them, and thus are created new foci of contagion. Instances without number might be cited to prove the mischief wrought by these amateur hypnotizers. Quite recently the Italian Government, on the advice of professors Lombroso and Tommasi, interdicted the exhibitions given by one Donato, a magnetizer, who had made upwards of forty persons ill in Milan and in Turin. The governments of Austria and Germany had some time previously forbidden one Hansen to ply his dangerous trade within their borders. Herein those governments did but confirm the view expressed by James Esdaile in 1846: "Public opinion will suppress all those who practice hypnotism for any other purpose save medical utility or philosophical research."

The facts here set forth are beyond all question, but should any one still doubt their reality, to him we would say, in the words of M. Charcot: "In the presence of evident facts, the scepticism that claims to be scientific is but arbitrary scepticism."

GERMS IN SNOW.

The following extract from the *British Medical Journal* treats of a subject which is of great practical interest:—

While the bacteriology of ice and hailstones has been studied with considerable success by Drs. Fränkel, Bischoff, Mitchell, Prudden, Pumpley, Hills, Stoben, A. V. Poehl, Bordone-Ufreduzzi, Bujwid, &c., that of snow has been up to the present almost wholly neglected. Even in Russia the subject has been touched only in a cursory way by Professor A. V. Poehl, of St. Petersburg, in the *Vratch*. In it he points out (1) that snow always contains viable microbes liquefying gelatine; (2) that, when snow falls, the first portions invariably contain greater numbers of bacteria than the subsequent ones (for example, 8,324 per cubic centimètre of snow-water, against 3,380 several hours later); (3) that, when snow lies on the ground, the superficial layers become richer in microbes (for example, 780 just after the fall, against 962 about three hours later). The fact is of interest from a sanitary point of view, as Dr. Poehl's researches furnish an additional proof that exposure of microbes to low temperatures does not destroy their vitality; at least, in certain species of micro-organisms.

In many countries, such as Russia or Sweden, snow forms, so to speak, a natural ground or soil during several months of the year, receiving excrementitious matter and every possible kind of refuse and filth. In spring, when the snow melts, it is imbibed by the soil, carrying with it all the polluting matters referred to. Hence an interesting question arises, "Are such microbes as happen to be

present in these matters in any way changed by their contact with snow, or not?" This point can be determined only by further bacterioscopic researches.

A contribution to the subject has just been published by Dr. F. G. Ianovsky, of Kiev, who has examined bacterioscopically, under Professor K. G. Tritshel's guidance, a February snow in its purest state, collected both immediately and from one to three days after its fall. This observer has found: 1. That, even when collected during its fall, snow is invariably found to contain living bacteria in considerable numbers, varying from 34 to 463 per cubic centimètre of snow-water. 2. That their number does not decrease from exposure of snow to low temperatures (16 degs. C.) for several days.

3. That the following three species of microbes are met with constantly in great numbers: (*a*) a large diplococcus composed of ovoid cocci, endowed with energetic motion, and characterized by its rapidly liquefying jelly (the test-tube culture on the third day, forming greenish colonies along the track of the needle, assumes the shape of a funnel-like sac with a whitish flocculent deposit, while on the fifth the whole medium becomes liquefied, the precipitate sinking to the bottom; on agar, a pale greyish-white streak is formed at the site of inoculation; on potato, a fairly thick white film); (*b*) small-sized cocci, often arranged two and two, energetically mobile, and slowly growing on jelly without liquefying the medium, the growth proceeding solely along the track of the needle in the shape of a narrow stripe consisting of non-coalescing minute points of a yellow colour, while on the surface the colony is seen as a greyish-white, circular, slightly prominent patch with somewhat fringed edges (on agar, the coccus forms a white streak with sinuous edges; on potato, a grey film with a brownish tint); (*c*) very large cocci, liquefying jelly as late as three weeks after inoculation, and growing along the track of the needle in the form of a sharply-defined streak of a beautiful pink colour, with a slightly-elevated pink circular patch or "cap" on the surface (on agar, the microbe forms a freely-spreading white film with a rosy tint; on potato, a thick, tallow-like, pink coat, with sharply-defined fringed contours).

4. That the first two species, (*a*) and (*b*), are also met with commonly in the water of the river Dnieper, which flows through the town, while the peculiar pink micrococcus seems to occur only in snow. 5. That, generally speaking, the microbes liquefying jelly in falling or recently fallen snow are met with invariably in far greater numbers than in snow which has been on the ground for some time; this, in fact, very often contains only such bacteria as do not liquefy gelatine. 6. That the bacteria of snow originate partly from aqueous vapours which are transformed into snow; partly and chiefly from the air, that is, they are carried away by the snow-flakes on their passage through the atmosphere.

"WHY, Georgie," said a girl to her little brother, "I've just heard that you were whipped at school last week. I had no idea of it till ma told me a few minutes ago." "Hadn't you?" responded George. And then he added, with an air of pride, "Why I knew it all the time."

AN UNNECESSARY CLUE.—A gentleman made a purchase in a North Pearl-street drug store a few days ago. The clerk tied up the package and inadvertently neglected to cut off the twine. The purchaser carelessly put the package in an outside coat-pocket and left the store. He had gone nearly a block when a passer-by noticed the string trailing behind him. He had unwound nearly a ball of twine without knowing it.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Treatment of Fatness.—Dr. W. T. Smith communicates to the *British Medical Journal* a method (noted in HEALTH sometime ago) for the treatment of obesity which he has successfully employed in forty-three cases, including himself. The plan which he follows is to confine the diet to rumpsteak, cod-fish, and hot water for fourteen days, with the absolute exclusion of everything else. Taking meat in large quantities may lead to dyspepsia, but this can be easily overcome by reducing the meat to an essence. This may be done as follows: Take four pounds of beef, free from skin and fat; cut it to pieces about an inch square; place the meat in a close-fitting, air-tight jar; stand the jar in a pan of boiling water, and let it simmer for six hours. Pass the juice of the meat thus obtained through a sieve; then measure four ounces of the fibrine of the meat; pulverize it in a mortar, and stir it up with the essence; divide this into four doses, and you will obtain the nitrogenous elements required of the quantity of meat to be taken at one meal. There is also a similar way of obtaining meat-essence by using a pot called "Boule Américaine." In treating his cases, in several instances he has been obliged to modify the amount of hot water, and lessen occasionally the quantity of meat; but as regards his own personal experience, he found that three pounds of rumpsteak and one pound of cod-fish were hardly sufficient to satisfy his appetite. The meat diet and hot water alone must be regularly adhered to for fourteen days; and the amount of hot water taken at any time during the day, commencing at seven in the morning and finishing at half-past ten at night, varies from six and one-third pints, more or less, according to the powers of the patient. The second epoch of twenty-one days the diet may be considerably varied, as he reduces the hot water to four pints in the twenty-four hours; and he allows other kinds of meat, such as mutton-chops free from fat, and chicken; and, as regards fish, grilled turbot, whiting, or soles; a little green vegetable, and some slices of plain, unsweetened rusk. The third epoch, thirty-one days, the hot water is reduced to about a quart a day, and he allows tea, stale bottom crust of household loaf, captain's biscuits, grilled fish, fowl, game, turkey, any joint, hock or claret, with seltzer-water, in place of whisky. As hot water is very unpalatable, a slice of lemon may be added to each tumbler. No case of obesity should be treated by this method when the patient is suffering from any organic disease, unless it be some trifling malady. The loss of weight in nearly all cases will vary somewhat; but Dr. Smith states that his patients bear the treatment exceedingly well, and express themselves as feeling far better in health, and able to take exercise with comfort. The first period of fourteen days is really the only hardship, and he has found very little difficulty in persuading patients to stick to the diet. As some alkali is essential, he prescribes five grains of the bicarbonate of potassium, to be taken night and morning. Dr. Smith offers to send his diet-cards to any medical practitioner who will write to him, but asking that the result of any case put under treatment be reported to him.

Economical Uses of Flowers.—The dried flowers of *Hemerocallis graminea* and the young flowers of the

plantain pickled in vinegar are choice Chinese foods. Capers are the flower-buds of a *Capparis* or a *Zygophyllum;* and cloves are the unexpanded flower-buds of *Caryophyllus aromaticus.* The petals of safflower, *Carthamus tinctorius,* yield a beautiful dye of various shades of colour between red and yellow. It is the carthamine of the pink saucers, and this, mixed with powdered mica or talc, forms a rouge for ladies' toilet-tables. The dried flowers of two species of *Butea,* locally known as *dhak, tisso, toolsee,* and *kassaree,* are extensively used in India for the production of orange and red dyes. The orange-red flowers, which grow in clusters, are pressed when fresh, or boiled or steeped when dried, in a weak solution of lime in water. The flower-buds of *Calasaccion,* which resemble a clove, the blossoms of a larkspur of Khorassan, and the white flowers of *Cedrela Toona,* give yellow dyes. The *Sophora Japonica,* a well-known ornamental shrub of our gardens, is cultivated in China for the sake of the imperial yellow dye obtained from its bunches of flowers and undeveloped flower-buds. Flowers of marigold are made into garlands in India for the idols and for the decoration of houses in festivals. The red flowers of *Hibiscus rosa-sinensis* supply a red dye, and have been used to polish boots and shoes. A fleeting orange or buff dye is extracted in India from the corolla tubes of *Nyctanthes,* which are also strung in necklaces for women. The flowers of the teak and of the pomegranate are used in India for dyeing red. The dried stigmas of the crocus are a source of saffron. Cake saffron is made of the florets pressed together with mucilage. Insect-powder is the pulverized dried flowers of *Pyrethrum.* In medicine, the female flowers of hops are tonic and narcotic; the Provence rose is considered astringent; the flowers of the hollyhock are mucilaginous and demulcent; those of *Grislea tomentosa* astringent and tonic; those of camomile tonic and anodyne. Infusion of linden-flowers is given as an antispasmodic. The flowers of the Abyssinian *Brayera anthelmintica* and the flower-heads of *Artemisia* act as vermifuges. Violets are considered purgative; but a conserve of the flowers with sugar has a grateful flavour for covering nauseous medicine. The flowers of the Indian *Mohwa* (*Bassia latifolia*) secrete much sugar, and are gathered by the natives during their season, in March and April. A single tree will yield many hundredweights of corollas. They are eaten by the poorer classes in various parts of India. The ripe flowers have a sickly smell and a sweet taste, resembling manna, and are stored as a staple of food; when dried they have somewhat the odour and appearance of Sultana raisins; containing 63½ per cent. of sugar, they are as nourishing as grain, but people could not live on them alone for any length of time. They are distilled by the Parsees, and yield a powerful, coarse spirit. Cowslip-flowers are used in wine-making, and the flowers of meadow-sweet to improve the flavour of certain wines. Some of the Chinese teas are often scented with flowers. The kinds of flowers and the processes are various, but the object of all is to make the tea more attractive.—*The Popular Science Monthly.*

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The Homes of the People.—In certain areas in London, the land is completely covered with a network of houses, where will be found thousands of our poor packed closely together, and families existing—it cannot be termed living—eating and sleeping in one small dark room. I will leave to the imagination of the reader a birth or a death under such circumstances. Only the other day I was told of a room with a dead child on a heap of rags in one corner, several living children huddled together in another, and the wretched mother momentarily expecting her confinement on a dirty mattress in another. Will any one venture to say that the sin of immorality will be visited by future punishment on those who exist under such circumstances? Will it not rather be laid to the door of those who take no trouble to remove causes which must inevitably tend to immorality? It has always seemed to me that it is one of the many wonderful miracles which we see daily taking place around us, that the greater number of even our poorest children come out of such a deteriorating environment honest men and pure women. The Royal Commissioners bore witness to this, and in their Report stated that they found "that the standard of morality in these crowded quarters is higher than might be expected, looking at the surroundings in which their lives are passed." Lord Shaftesbury's evidence on the one-room system was to the point. He said: "The effect of the one-room system is physically and morally beyond all description. In the first place, the one-room system always leads, as far as I have seen, to the one-bed system." Many cases of overcrowding existed at that time, and still exist. In Spitalfields one house of nine rooms was reported as containing an average of seven persons in each room, and in no room more than one bed. Evidence was also given that in some cases closets were used as sleeping places by the homeless poor, and in houses down back streets where the lock of the front door had been broken, staircases and passages were, and still are, used for sleeping and for immoral purposes. Then we also have in the Report a general consensus of opinion as to the physical deterioration of dwellers in overcrowded districts, which shows not only in themselves but unfortunately in their children. This is not a case of "the sins of the fathers being visited on the children," but rather the sins of the country being visited on the country by the fact of half-useless citizens being born into the world. Infantile mortality was stated to be very large, and in St. Luke's, ophthalmia, with the local cognomen of "the blight," was very prevalent. But there is a huge amount of suffering besides sickness. A Board of Health Inquiry some years ago ascertained that upon the lowest average in overcrowded districts, every workman or workwoman lost about twenty days in the year from simple exhaustion. It is the usual custom to attribute poverty and disease to intemperance, particularly by those who will not move a finger or stir a step to help in any way Temperance legislative reforms. I am convinced that many of those who take to drink have been induced to take the first step by the condition of the houses in which they live. If the wealthy ever feel exhausted they take a glass of wine. The workman or workwoman who loses twenty days in the year from simple exhaustion often keep themselves going by a glass of spirits at the public-house. I know, of course, that drink causes many to drift into the classes of the poor and very poor, but intemperance is not only the cause, but also the consequence of overcrowding. It is not easy to arrive at any conclusion as to actual waste of life through overcrowding. The death-rates prove but little, and this is shown by that fearful sentence in the Report from which I have already largely quoted, "the very poor die comparatively seldom in their homes." In London, one out of every five of this class dies in the hospital, workhouse, or the prison.—*Earl Compton, M.P., in "The New Review."*

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Increasing Longevity.—Dr. Todd, president of the Georgia State Medical Society, read at the annual meeting of that body, held at Atlanta recently, a paper on

"Longevity," which possesses great intrinsic interest, and at the same time is gratifying as showing how much medical and sanitary science and a more rational mode of life have done to prolong the human span, and how much better in every way are the conditions of to-day than of those "good old times" for the return of which sentimentalists vainly sigh. The doctor is modest in his claims, making no effort to monopolize in the name of the medical profession credit for a betterment in which so many agencies play parts; but he does claim, and with reason, that the intelligent physician has had much to do with the result, and that the death-rate of the various peoples of the globe bears a ratio very nearly inverse to the number of qualified physicians among them. The highest death-rate in Europe is that of Russia, ranging from 20 per thousand in Courland and 22 per thousand in the Baltic province, there being many physicians in both districts, to 49 in places where there are but few. But one-half of the children born in some parts of Russia reach the seventh year, and of 1,000 male children only from 480 to 490 reach the age of 21 years, and of these only 375 are able-bodied. Russia, with all its teeming population, has only 15,414 regular physicians, and one surgeon to 100,000 population. The United States, having a doctor of medicine for every 600 population, shows the lowest death-rate in the world, England following. The average life-expectancy in the United States is now 55 years; in England among the urban population it is 50, and among the ruralists 54 years plus. Russians have a life-expectancy of but 28 years, approximately, and Chilians of the same; while in Ellobed, in the Soudan, 23 years is a generation. The average life in the Rome of the Cæsars was 18 years; now it is 40 years. Within fifty years the average in France has increased from 28 to 45½ years, and in the days of Queen Elizabeth the English average was but 20 years. Dr. Todd ascribes the great and progressive change for the better to advanced medical knowledge, better drainage and diet, greater cleanliness, and to vaccination and the use of anæsthetics, quinine, and the like. He thinks that quinine alone has added two years to the average life of civilized man. To these agencies should be added the decrease of war, the more lenient laws, and the greater temperance of our day.—*Detroit Free Press.*

"BOLTON told me he had borrowed some money from you. I was surprised, because I never heard you say anything about it." "No; I still hope to get it back."

DELAYS ARE DANGEROUS.—"Doctor, just an instant, please," exclaimed a caller at the office of a man of physic, as he caught sight of the physician disappearing in his private office. "I'll see you shortly, sir," was the curt reply. "But a second is all I want," persisted the caller. "I'll see you directly, sir," with sternness. The visitor took a seat in the general reception-room, read the afternoon paper through, looked at the pictures, played with the dog, and took a nap. After thirty minutes or more had passed the medicine man came out of his den, and with an air of condescension said to the visitor: "Well, now, my man, I am at your service. Your turn has come. What can I do for you." "Oh, nothing in particular," was the reply. "I just dropped in to tell you that your neighbour's three cows have escaped from the barn and are having a picnic in your garden and backyard flower-beds."

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Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

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1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

WICK.—See advice regarding the hair given to "A. Swinton" in HEALTH, No. 319.

T. J.—1. Not dangerous. 2. Depends entirely on the surgeon you employ. If there is no great pain, why not try wearing a suspensory bandage, and bathing each morning and night with cold water and Hazeline.

ANXIOUS ENQUIRER.—Use the inhaler recommended to "Scotia" in the last number of HEALTH, and try sponging your chest with cold water (in which salt has been dissolved) every morning, rubbing dry with a bath towel thereafter. If you can take a cold sponge bath each morning, so much the better. After meals, take a teaspoonful of Inman's Syrup of the Hypophosphites in a wine-glass of water; and write again if not cured.

PALLIDA.—Read and follow the advice given in the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will recover your tone. All your symptoms arise from constipation and lack of exercise. The pamphlet will show you how to cure yourself.

GLYCERINE.—The formula you send is a very crude one, and we consider the quantity of saltpetre in it dangerous. If you are troubled with your liver, adopt the advice given to "Star" in HEALTH, No. 319; and if not cured, write again.

READER.—Write to the Publisher of HEALTH for the series of articles on "The Hair and its Troubles," and if you do not find full information therein given regarding remedies for your case, write again, and we will advise you.

TAFFEY.—1. Apply to Bayley, 17, Cockspur-street, London, S.W., for a cure for piles. 2. For the relief of the itching try Vinolia as an application, and wash the parts with Vinolia Soap, to be had from Roberts & Co., 76, New Bond-street, London, W. Let us hear how these remedies affect you.

BRONCHITIS.—We advise you to clothe warmly but lightly in the Hygienic Underclothing of Mr. Forsyth, 13, Renfield-street. Glasgow, which is adapted both for summer and winter wear. This is your best protection against chill. Cease the dry skin-friction to which you allude; and, for the rest, try the remedies recommended to "Scotia" in the last number of HEALTH. The inhaler especially will be likely to do you good when your attacks come on, while the tonic will improve your general health. Glad to advise again, if necessary.

OMEGA.—1. For anæmia, in females especially. 2. Yes, very good and pure. 3. A good preparation.

A. M. D.—You had better undergo examination at the hands of a good surgeon. There may be a slight stricture. Give up all drugs, and simply continue the Pitkeathly water. Send stamped addressed envelope for surgeon's address.

EROS.—The "spots before your eyes" are due to your constipation and liver irregularity. Follow the advice given to "A. Reid" in last week's HEALTH, and you will probably find your troubles to disappear.

JUSTUS.—1. You mean the Zander Machines. They are now the property of the Medical Battery Co., of Oxford-street, London, W. 2. The proportion is one to twenty. 3. The technical name is "pruritus."

VERA LASCELLES.—There is no test apart from a chemical analysis. The taste is at best a deceptive means of distinguishing the acid.

C. B. M.—Give Horsford's Acid Phosphate (advertised in our pages) a fair trial. It is a tonic admirably suited for a case like yours.

R. R.—Read the pamphlet, "A Lecture to Young Men" (published by Mr. Renshaw, 356, Strand, London, W.C., post free, 1s. 1d.), and attend to the full directions therein given regarding your health.

GENTIAN.—Address your inquiry direct to Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C. The dose will depend on the amount of the drug contained in each lozenge.

A. GORDON.—A hair-lotion adapted to promote growth is made as follows:—Tincture of nux vomica, three drachms; distilled vinegar, two and a half ounces; tincture of capsicum, one drachm; tincture of cantharides, six drachms; spirits of rosemary, one ounce; rose water to make up six ounces. Rub a little into the roots of the hair each morning.

P. GRAHAM.—Try the effect of giving one Antipyrin Tabloid (five grains each) every two hours until four tabloids have been taken, when the pains are severe, repeating these doses next day, if necessary. The tabloids are to be had from druggists, and are made by Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C.

S. E. R.—In such a case we recommend you to use a belladonna suppository, containing a quarter of a grain of belladonna, at night. Internally, take twenty grains bromide of potash in water twice daily between meals, so long as your symptoms last.

GEORGE L.—Read carefully the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the directions therein given regarding diet, tonics, and bathing.

NURSE.—"A Manual of Urine Testing," by K. M. Feanley, published by H. K. Lewis, Gower-street, London, W.C., should suit you.

MAINTENANT.—For sore or relaxed throat, try an alum gargle. This is made of alum, two and a half drachms; honey, one ounce; warm water, one pint. About two tablespoonfuls to be used at a time for a gargle, twice or thrice daily.

PULVERMACHER'S

For the speedy Removal of all

PAIN, PARALYSIS, RHEUMATISM,

AND

WASTING DISEASES OF THE NERVOUS SYSTEM.

PAMPHLETS FREE. ADVICE GRATIS.

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For the speedy Removal of

LIVER COMPLAINT, INDIGESTION, CONSTIPATION, WEAKNESS of the BOWELS, and NERVOUS EXHAUSTION.

PAMPHLETS FREE. ADVICE GRATIS.

APPLIANCES.

ADDRESS—

MR. PULVERMACHER,

194, REGENT-STREET,

LONDON, W.

ESTABLISHED OVER FORTY YEARS.

B. S. A.—A remedy for flatulence and offensive breath, arising from digestive disturbance, is as follows:—Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals.

M. BAXTER.—Try the effect of taking a pill composed of two grains sulphate of quinine an hour before dinner daily. Apply Tidman's Sea Salt, heated, dry, in a flannel bag or stocking, to the shoulders when the pain is severe, and bathe the parts each morning in a strong solution of salt and tepid water.

ALCESTER.—Give up the tonic for a time, and take twenty or thirty drops of the Cascara Cordial, or two Cascara Tabloids, twice daily between your meals. Eat wholemeal bread, stewed fruits, and vegetables, and avoid tea and coffee. Substitute for tea, morning and night, Scott's Midlothian Oat Flour.

E. PARROTT.—Take the following mixture, and adopt a light diet: Bicarbonate of soda, two drachms; dilute hydrocyanic acid, twelve minims; compound infusion of gentian, to eight ounces. Mix. Take a tablespoonful twice daily, an hour before meals.

NONE SUCH.—Read the pamphlet, "A Lecture to Young Men," (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will find your mind relieved by its perusal.

ALGIE.—Such spots are due simply to local skin-irritation, and most frequently to chills after being over-heated. Take a dose of Lamplough's Pyretic Saline in the morning, and avoid excess of flesh-food. Wash the face with Bayley's Spermaceti Soap and soft water, and dust on the parts a little of Woolley's Sanitary Rose Powder at night.

BLAINA.—You give us no particulars regarding your food, habits, &c., but we judge that in your case, from the symptoms named, you are suffering from digestive irregularity. Try the remedies recommended to "A. Reid" in the last number of HEALTH, and if not cured, write again.

EARLY.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the directions given therein regarding diet, cold sponging, and exercise. For the cure of blackheads read article on that subject in HEALTH, No. 199, price 2½d., to be had from the Publisher.

P. T. HENRY.—We are sorry we are unable to find the reference you require. You may, however, discover it by a search through our volumes. Use the "Nebulizer" advertised in our pages, and employ therein one of the mixtures, the formula for which will be supplied with the apparatus. You will cure yourself by avoiding the country when the pollen of grasses is given off. Try the seaside for a week or two, and as a tonic take a teaspoonful of Inman's Hypophosphites (advertised in our pages) in a wineglass of water, after meals, twice daily. Let us know if this treatment benefits you.

W. J. T.—1. The gist of the experiment simply means that the tissue-changes were expedited and increased not in amount so much, but rather in point of quickness or time. There is nothing injurious in such action; many other fluids or food-articles, doubtless, affect the wear and tear of our bodies in a similar way. 2. Such an article appeared in last number of HEALTH.

NERVOUS DEPRESSION.—Read the pamphlet recommended to "Early" in the present number, and get rid of all your foolish and groundless fears. Surely to take a cold bath each morning is a rational proceeding. Beware of quacks, who flourish on cases such as yours.

M. P.—Try what a change of food will do, and follow out the advice given to "A. Reid" in last week's HEALTH. If not cured, write again.

A. HOSTER.—No, not painful at all, and accomplished in a second or two. Usually no trouble is caused afterwards. The quantity removed is extremely small.

LEARMOUTH.—1. Mr. Pulvermacher, 194, Regent-street, London, W., will supply you with the apparatus you require. State your wants fully to him. 2. Excellent for debility.

B. S.—1. Horsford's Acid Phosphate may be given as directed on the bottle. 2. Mellin's Food is the most suitable.

S. FRANKLIN.—Try the Soden Mineral Pastilles; and take fifteen drops Fer Bravais after your meals, in water, thrice daily.

Delicious Drink

Horsford's Acid Phosphate

Makes a healthful and invigorating drink with water and sugar only. It harmonizes with such stimulants as may be necessary to take. A desirable substitute for lemons or lime juice. Allays the thirst, aids digestion, and relieves lassitude. A teaspoonful added to a glass of hot or cold water, and sweetened to the taste, makes a delicious lemonade, and will be found refreshing and invigorating.

Dr. THOS. L. WHISTLER, Bray, Ireland, says: "I have found it extremely grateful as a drink with water."

Descriptive pamphlet post-free on application to
Rumford Chemical Works,
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Beware of Substitutes and Imitations.

CAUTION.—Be sure the word "Horsford's" is printed on the label. All others are spurious. Never sold in bulk.

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FURNITURE RESTORER.

Will re-polish any large piece of furniture in five minutes.
No hard rubbing required.
A child can use it.
Is invaluable for removing "bloom" from high-class varnished woodwork.

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Sample Bottle, with Directions for use, gratis, on receipt of Two Stamps.

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Debility, Rheumatism, Gout, Sciatica, Torpid Liver, Kidney Disorders, and every form of weakness may be speedily cured by wearing

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It generates a mild continuous current of Electricity.

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Prevents Decay. Saves Extraction. Sleepless Nights Prevented. Neuralgic Headaches and all Nerve Pains removed.

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BUNTER'S NERVINE. Sold by all Chemists, 1/1½.

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IS THE MOST SIMPLE AND
PERMANENT STOPPING for DECAYED TEETH.

Any one can easily prepare and place it in the cavity of the Tooth in a soft state, and in a short time it becomes a perfectly hard and white Enamel, forming, as it were, a part of the original substance of the Tooth.

All Chemists, 1/6. *Post Free,* 19 *Stamps, by Proprietor.*

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Tooth Polish

Will Purify and Beautify the Teeth with a Pearly Whiteness; Polish the Enamel; Destroy Tartar and all Living Germs; and Keep the Mouth in a Delicious Condition of Comfort, Health, Purity, and Fragrance. It is not a Powder or Soft Paste that will scatter over clothing and soil the toilet, but a Dental Paste of stiff consistency, non-gritty, and Absolutely Pure. May be carried in the pocket in any climate of the world, without injury or losing its virtues.

Price 1/- *Sold by Chemists, Perfumers, &c., or sent post free by Proprietor.*

PURILINE

Tooth Wash

FOR THE TEETH, GUMS, AND BREATH.

A PURE, PERFECT, AND REFRESHING FLUID DENTIFRICE.

A few drops in water used daily will thoroughly Cleanse, Beautify, and Preserve the Teeth; Polish the Enamel, prevent Tartar, Destroy all living "Animalculæ." It is Absolutely Pure and Harmless to the Youngest child or most delicate constitution.

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Without the Borax, for persons to whom its flavour would not be agreeable. 2/6 per Box.

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For making COCA Wine, the dose being 15 to 20 drops to the wineglass; can be taken in any fluid. 3/- per Bottle.

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COCA, in combination with selected Teas; tonic, invigorating, and delicious. 4/- per lb.

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A WONDERFUL MEDICINE.

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ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

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For females of all ages these Pills are invaluable, as a few doses of them carry off all humours, and bring about all that is required. No female should be without them. There is no medicine to be found equal to Beecham's Pills for removing any obstruction or irregularity of the system. If taken according to the directions given with each box they will soon restore females of all ages to sound and robust health. This has been proved by thousands who have tried them, and found the benefits which are ensured by their use.

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PRICE 3d PER TABLET.

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A WOMAN'S HEALTH SO OFTEN BREAK DOWN AT AN EARLY AGE? PUT A MAN AT A WASHING TUB LET HIM GET HEATED WITH THE HOT SUDS UNTIL EVERY PORE IS OPENED, THEN LET HIM STAND OVER THE FILTHY STEAM THAT COMES FROM SCALDING & BOILING CLOTHES AND HIS HEALTH CERTAINLY WOULD BREAK DOWN BEFORE LONG & YET THIS TERRIBLE ORDEAL IS EXACTLY WHAT

A WOMAN

HAS TO GO THROUGH ON WASHING DAYS; AND BESIDES WHILE OVERHEATED AT THE HOT WORK SHE HAS TO RISK HER LIFE BY GOING OUT IN THE OPEN AIR TO HANG UP CLOTHES THESE FACTS WHICH ARE KNOWN TO EVERY HOUSEKEEPER, READILY EXPLAIN WHY SO MANY WOMEN

LOOK OLD

WHILE YET YOUNG IN YEARS, AND PHYSICIANS & BOARDS OF HEALTH CANNOT DRAW ATTENTION TOO STRONGLY TO THE INJURIOUS EFFECTS OF THE USUAL WAY OF WASHING WITH ITS NECESSARY STEAM & SCALDING OR BOILING TO GET THE CLOTHES PURE & SWEET. FORTUNATELY THIS TROUBLE CAN BE AVOIDED SCALDING, BOILING & STEAM DONE AWAY WITH, CLOTHES MADE SWEET & BEAUTIFULLY WHITE & MUCH

SOONER THAN

BY THE OLD WAY BY USING SUNLIGHT SOAP A SOAP SO PURIFYING & CLEANSING THAT THE DIRTIEST CLOTHING CAN BE WASHED IN LUKEWARM WATER WITH VERY LITTLE RUBBING, AND CLOTHES, BEDDING & LINEN CLEANSED WITHOUT EITHER SCALDING OR BOILING, WHILE THE WORK IS SO LIGHT THAT A GIRL OF 12 OR 13 CAN DO A LARGE WASH WITHOUT BEING TIRED. NOW THAT THERE IS A REMEDY FOR THE GREAT WASHING DAY EVIL SO ECONOMICAL IN ITS USE AS TO BE WITHIN THE REACH OF ALL THERE IS NOT A WOMAN OR

A MAN?

WHO IS NOT DIRECTLY INTERESTED IN HAVING INTRODUCED INTO THEIR HOUSES THAT WONDERFUL WAY OF WASHING CLOTHES WHICH WHEN PROPERLY TRIED DOES AWAY WITH THE HARD WORK, OFFENSIVE SMELL & FEARFUL STEAM ON WASHING DAY AND MAKES THE WHITE PIECES WHITER, COLOURED PIECES BRIGHTER, AND FLANNELS SOFTER THAN THEY CAN BE MADE BY WASHING THE OLD WAY & ALSO LEAVES EVERY ARTICLE AS CLEAN AND SWEET AND AS PURE AS IF NEVER WORN.

LARGEST SALE IN THE WORLD

SOAP

SIR CHARLES A. CAMERON, M.D.,

Ex-President of the Royal College of Surgeons, Vice-President of the Institute of Chemistry of Great Britain, Chief Medical Officer of Health for Dublin, S.B.C.C. Cambridge University, Member of the College of Physicians, Professor of Hygiene and Chemistry, Royal College of Surgeons, Ireland, Hon. Mem. Societies of Hygiene, Paris, Bordeaux, and Belgium, Laboratory, Royal College of Surgeons, Stephen's-green, W., Dublin, REPORTS:—

February 15th, 1888.—I have carefully analyzed specimens of the "SUNLIGHT SOAP" submitted to me for that purpose by Messrs. Lever Brothers, Warrington, and the following are the results at which I have arrived:—

* * * * * * *

The points in the composition of this Soap that are most valuable are its freedom from free alkali, the large percentage of fatty acids which it contains, and the purity of the materials employed in its preparation. I EMPLOY THE SOAP FOR MY OWN TOILET PURPOSES, and from my actual experience of it can strongly recommend it. *(Signed)* CHARLES A. CAMERON.

Printed for the Proprietor by HENDERSON & SPALDING, at 3 and 5, Marylebone-lane, Oxford-street, in the Parish of Marylebone, in the County of Middlesex, and Published by ALEXANDER P. WATT, at No. 2, Paternoster-square, London, E.C.